

## Checklist of New Records of Subfamily Lamiinae (Coleoptera: Cerambycidae) in Northern Thailand

Suksawat Ponpinij\*, Praparot Hormchan and Valuli Rojanavongse

### ABSTRACT

Collections were made of longhorn beetles, subfamily Lamiinae (Coleoptera: Cerambycidae), during 2004–2008 from specimens caught on flowers, trees and light traps from northern Thailand for taxonomic studies. Specimens were compared with samples from the Department of Agriculture, Royal Forest Department, Kasetsart University, the private collection of Bro. Amnuay Pinratana and by expert identification. The results revealed 47 newly recorded species in northern Thailand—namely, *Agelasta bifasciana*, *Anamera desmaculata*, *A. obesa*, *A. strandi*, *Anameromorpha metallica*, *Annamanum chebanum*, *Anoplophora birmanica*, *A. medenbachii*, *A. stanleyana*, *Astathes violaceipennis*, *Batocera thomsonii*, *Blepephaeus ocellatus*, *Cleptometopus similis*, *Choeromorpha subfasciata*, *Cylindrepomus viridipennis*, *Driopea luteolineata*, *Epicedia maculatrix*, *Eutaenia albomaculata*, *Glenea mathematica*, *G. quadrinotata*, *G. subviridescens*, *G. vaga*, *Gnoma gilmouri*, *Hirtaeschopalaea fasciculata*, *Hoplothrix rivulosus*, *Mispila kamvengal*, *Monochamus guerryi*, *Nipholophia chujoi*, *Nupserha spinifera*, *Olenecamptus fouqueti*, *Parachydaeopsis laosica*, *Pharsalia duplicata*, *P. pulchroides*, *Phrissomorimus brunneus*, *Pterolophia bituberculatithorax*, *P. humerosa*, *P. mimoconsularis*, *P. paralaosensis*, *P. partealbicollis*, *Rhodopina griseipes*, *Serixia apicefuscipennis*, *Sthenias franciscana*, *Stibara humeralis*, *S. subpunctata*, *Thylactus uniformis*, *Trachystohammus subelongatus* and *Xenolea asiatica*.

**Keywords:** subfamily Lamiinae, new records, check list, Thailand

### INTRODUCTION

Longhorn beetles of the subfamily Lamiinae (Coleoptera: Cerambycidae) have been relatively well studied (Gressitt *et al.*, 1970; Cherepanov, 1990; Holzschuh, 1991a, 1991b, 1991c, 1992, 1993, 1995, 1998, 1999; Ek-Amnuay, 2002; Lingafelter and Hoebeke, 2002). However, there is insufficient knowledge about the regional distribution of longhorn beetles in Thailand and especially in the forests and mountains. All the members of this subfamily are

xylophagous and phytophagous (Özdikmen and Çağlar, 2004). The larvae develop in plant tissues. Adaptation to such a large variety of host plants has resulted in tremendous variation in the behavior and ecology of these borers. Many species are important pests of forests, plantations and street trees. Different species attack various types of trees and shrubs. A few attack living trees, but most species appear to prefer freshly cut logs or weakened and dying trees or branches. However, some are beneficial insects through their role as insect pollinators on some plant species

Department of Entomology, Faculty of Agriculture, Kasetsart University, Bangkok 10900, Thailand.

\* Corresponding author, e-mail: dongento@yahoo.com

(Gutowski, 1990; Tasen, 2001). Some longhorn beetles may be valuable bio-indicators of forest health and useful for conservation as indicators of the destruction or fragmentation of their habitat (Baur *et al.*, 2002, 2005; Noerdjito *et al.*, 2003).

Northern Thailand is a tropical upland area, being composed of a series of parallel mountain ranges which are eastern outliers of the Himalayas. Elevations vary from around 300 m above sea level (a.s.l.) in the lower valleys and plains to 2,576 m a.s.l. on Doi Inthanon, the highest mountain in Thailand. The average height above sea level of the mountain ranges is 1,200 m and they are incised by the steep valleys of the Ping, Wang, Yom, and Nan River systems. The complex geography and numerous altitudinal gradients support a high biodiversity of flora and fauna. Many appear to be of Himalayan origin, suggesting the ranges have acted as corridors for the biota, but locally endemic taxa can also be found here. Northern Thailand retains some extensive areas of natural rainforest and is an important centre for conservation (Department of National Park, Wildlife and Plant Conservation, 2010).

At present, the bio-conservation of Thailand's northern forests is much better than in other regions. According to Department of National Park, Wildlife and Plant Conservation (2010), 59.02% of the forest in the north is still in good condition. However, in the future, the forest area may be decreased by agriculture and even more so by deforestation. As a consequence, insect abundance will be lessened too. Little information concerning the longhorn beetle has been found; hence, this study was initiated.

The subfamily Lamiinae, commonly called flat-faced longhorns, has general characteristics of a pointed terminal segment of the maxillary palps, a rather vertical face that is elongated, parallel-sided and usually somewhat cylindrical. The pronotum is often a little narrower than the base of the elytra. A new record of distribution identifies a location for which there

are no previously published records, though such species may have already been described.

In Thailand, the present research presented data regarding new records of longhorn beetle species of the subfamily Lamiinae and their distribution in northern Thailand.

## MATERIALS AND METHODS

The studies were conducted from 2004 to 2008 in 17 provinces in northern Thailand. Longhorn beetles were intensively collected on flowers, trees and light traps. Individual collected specimens were picked up with forceps and placed in a killing jar. Generally, the most useful killing agent was ethyl acetate which both killed the insect and kept it relaxed. The specimens were kept inside killing jars for transportation. In the laboratory, all fresh specimens were pinned and dried in an oven at 37 °C for 14 d for small specimens and 30 d for medium-sized specimens. After the specimens were dried, they were transferred into standard insect drawers. The length of each longhorn beetle specimen was recorded in millimeters measured from the antennal tubercles to the elytral apex, and the breadth recorded at the widest point of the elytra. Specimens were maintained in the insect collection in the Department of Entomology at Kasetsart University.

The collected specimens were compared with identified specimens from the Department of Agriculture, Royal Forest Department, Kasetsart University, and the Bro. Amnauy Pinratana private collection where there were also several foreign specimens from localities around the world. Comparison was based on the external morphology of the head, pronotum and elytra. Collected specimens that could not be reliably classified were sent for identification to various specialists. A great deal of the reference material used in this study was collected by Bro. Amnauy Pinratana and others during 1986–2005. Generic

assignments were determined based on published and additional consultation with Dr. Hiroshi Makihara, Forestry and Forest Products Research Institute, International Information and Cooperation Section, Japan.

## RESULTS

Many longhorn beetles were collected from different areas in 17 provinces in northern Thailand and 47 species were found to be new records in Thailand. The locations of the new species (some being found in more than one province) were: 22 in Chiang Mai province; 9 in Chiang Rai province; 5 in Tak province; 3 in each of Mae Hong Son, Kamphaeng Phet, Lampang, Phetchabun and Phrae provinces; 2 in each of Nan and Phitsanulok provinces; and 1 in each of Lamphun and Phayao provinces. In five provinces—namely, Nakhon Sawan, Uthai Thani, Uttaradit, Phichit and Sukhothai, no specimens of newly recorded species were found.

### *Agelasta bifasciana* White, 1858

Geographical distribution: The species has been reported in India, Vietnam, Laos and Jordan. Its new record was from Chiang Mai province, Thailand.

Specimen examined: Chiang Mai province: Fang, 28.10.2006(1 ♀).

Length 20-26 mm; breadth 9-11 mm (Gressitt *et al.*, 1970).

### *Anamera desemaculata* Breuning, 1940

Geographical distribution: The species has been reported in Vietnam and Laos. Its new record was from Chiang Mai province, Thailand.

Specimen examined: Chiang Mai province: Maerim, 1.04.2003(1 ♀).

Length 16.5 mm; breadth 7 mm.

### *Anamera obesa* Pic, 1928

Geographical distribution: The species has been reported in Vietnam, Laos and Myanmar. Its new record was from Chiang Mai province, Thailand.

Specimen examined: Chiang Mai province: Mae Chaem, 5.09.2004(1 ♀).

Length 19.5 mm; breadth 7 mm.

### *Anamera strandi* Breuning, 1940

Geographical distribution: The species has been reported in Java and Myanmar. Its new record was from Chiang Mai, Thailand.

Specimen examined: Chiang Mai province: Doi Saket, 7.07.2003(1 ♀).

Length 13.5 mm; breadth 5.5 mm.

### *Anameromorpha metallica* Pic, 1923

Geographical distribution: The species has been reported in Borneo, Vietnam and Laos. Its new record was from Chiang Mai province, Thailand.

Specimen examined: Chiang Mai province: Fang, 22.09.2006(1 ♀).

Length 19.5 mm; breadth 7 mm.

### *Annamanum chebanum* (Gahan, 1895)

Geographical distribution: The species has been reported in Myanmar, India and Laos. Its new record was from Chiang Mai province, Thailand.

Specimen examined: Chiang Mai province: Maerim, 9.10.2002(1 ♀).

Length 16 mm; breadth 5 mm.

### *Anoplophora birmanica* H. depohl, 1990

Geographical distribution: The species has been reported in Myanmar.

Its new record was from Chiang Mai province, Thailand.

Specimen examined: Chiang Mai province: Fang, 6.07.2005 (1 ♀).

Length: 48 mm; breadth 18 mm.

### *Anoplophora medenbachii* (Ritsema, 1881)

Geographical distribution: The species has been reported in Indonesia (Sumatra and Java) and Malaysia. Its new records were from Chiang Mai and Chiang Rai provinces, Thailand.

Specimen examined: Chiang Mai province: Chiang Dao, 4.02.2003(1 ♂): Chiang Rai province: Wiang Pa Pao, 17.03.2005(1 ♀).

Length 32-34 mm; breadth 10-12 mm.

***Anoplophora stanleyana* Hope, 1839**

Geographical distribution: The species has been reported in India (Assam and Sikkim), Bhutan, Vietnam and Myanmar. Its new record was from Nan province, Thailand.

Specimen examined: Nan Prov.: Mae Charim, 15.02.2005(1 ♀).

Length 48 mm; breadth 18 mm.

***Astathes violaceipennis* (Thomson, 1857)**

Geographical distribution: The species has been reported in India, Vietnam, Myanmar and Nepal. Its new records were from Chiang Mai and Chiang Rai provinces, Thailand.

Specimen examined: Chiang Rai province: Wang Pa Pao, 5.06.2002(1 ♀); Chiang Mai province: Samoeng, 2.02.2006(1 ♀).

Length 15.5-16 mm; breadth 6.5-7 mm.

***Batocera thomsonii* Javet, 1858**

Geographical distribution: The species has been reported in Malaysia, Sumatra and Borneo. Its new records were from Kamphaeng Phet and Chiang Mai provinces, Thailand.

Specimen examined: Kamphaeng Phet province: Khlong Lan, 10.05.2004(1 ♀); Chiang Mai province: Samoeng, 3.08.2005(1 ♀), Fang, 2.03.2002(1 ♂).

Length 46-56 mm; breadth 16-20 mm.

***Blepephaeus ocellatus* (Gahan, 1888)**

Geographical distribution: The species has been reported in India, Malaysia, Myanmar, Vietnam, Laos and Bhutan. Its new records were from Chiang Mai and Chiang Rai provinces, Thailand.

Specimen examined: Chiang Rai province: Wiang Pa Pao, 5.06.2002(1 ♂); Chiang Mai province: Samoeng, 3.08.2005(1 ♀).

Length 15-17 mm; breadth 4-6 mm.

***Cleptometopus similis* (Gahan, 1895)**

Geographical distribution: The species has been reported in Indonesia and Laos. Its new record was from Chiang Mai province, Thailand.

Specimen examined: Chiang Mai province: Mae Chaem, 7.04.2005(1 ♀).

Length 9 mm; breadth 1.5 mm.

***Choeromorpha subfasciata* (Pic, 1922)**

Geographical distribution: The species has been reported in Malaysia, Vietnam and Laos. Its new record was from Phayao province, Thailand.

Specimen examined. Phayao province: Chiang Muan, 6.10.2004(1 ♀).

Length 19.5 mm; breadth 9.5 mm.

***Cylindrepomus viridipennis* (Pic, 1937)**

Geographical distribution: The species has been reported in Vietnam and Laos. Its new record was from Chiang Mai province, Thailand.

Specimen examined: Chiang Mai province: Mae Taeng, 2.06.2004(1 ♀), 7.04.2005(1 ♀).

Length 18.5-20.5 mm; breadth 3.5-4 mm.

***Driopea luteolineata* Pic, 1926**

Geographical distribution: The species has been reported in Vietnam and Laos. Its new record was from Chiang Rai province, Thailand.

Specimen examined: Chiang Rai province: Wiang Pa Pao, 5.06.2002(1 ♀).

Length 8 mm; breadth 2 mm.

***Epicedia maculatrix* (Perty, 1831)**

Geographical distribution: The species has been reported in Indonesia and Borneo. Its new record was from Chiang Mai province, Thailand.

Specimen examined: Chiang Mai province: Mae Chaem, 15.08.2006(1 ♀).

Length 29 mm; breadth 10 mm.

***Eutaenia albomaculata* Breuning, 1964**

Geographical distribution: The species has been reported in Myanmar, India, Vietnam and Laos. Its new record was from Chiang Mai province, Thailand.

Specimen examined: Chiang Mai province: Mae Taeng, 1.10.2005(1 ♀); Mae Chaem, 1.03.2006(1 ♀).

Length 18mm; breadth 6 mm.

***Glenea mathematica* (Thomson, 1857)**

Geographical distribution: The species

has been reported in Malaysia, Indonesia and Laos. Its new record was from Chiang Mai province, Thailand.

Specimen examined: Chiang Mai province: Fang, 5.09.2003(1 ♀).

Length 11 mm; breadth 2.5 mm.

***Glenea quadrinotata* Guérin-Méneville, 1843**

Geographical distribution: The species has been reported in India, Malaysia and Indonesia. Its new record was from Mae Hong Son province, Thailand.

Specimen examined: Mae Hong Son province: Mae Sariang, 22.07.2004(1 ♀).

Length 15.5 mm; breadth 3.5 mm.

***Glenea subviridescens* Breuning, 1963**

Geographical distribution: The species has been reported in Laos.

Its new records were from Chiang Mai, Chiang Rai and Phayao provinces, Thailand.

Specimen examined: Chiang Mai province: Mae Chaem, 7.04.2005(1 ♂); Chiang Dao, 4.02.2003(1 ♀); Chiang Rai province: Wiang Pa Pao, 17.03.2005(1 ♂); Phayao province: Chiang Kham, 5.09.2004(1 ♀).

Length 17-22 mm; breadth 3.5-5 mm.

***Glenea vaga* Thomson, 1865**

Geographical distribution: The species has been reported in Malaysia, Myanmar and Laos. Its new record was from Chiang Mai province, Thailand.

Specimen examined: Chiang Mai province: Mae Taeng, 6.07.2003(1 ♂, 1 ♀).

Length 10 mm; breadth 2.5 mm.

***Gnoma gilmouri* Dillon and Dillon, 1951**

Geographical distribution: The species has been reported in Malaysia.

Its new record was from Mae Hong Son province, Thailand.

Specimen examined: Mae Hong Son province: Mae Sariang, 2.12.2005(1 ♂, 1 ♀).

Length 21-24.5 mm; breadth 5.5-7 mm.

***Hirtaeschopalaea fasciculata* Breuning, 1938**

Geographical distribution. The species

has been reported in India, China and Laos. Its new record was from Kamphaeng Phet province, Thailand.

Specimen examined: Kamphaeng Phet province: Khlong Lan, 5.12.2005(1 ♀).

Length 8 mm; breadth 2 mm.

***Hoplothrix rivulosus* (Gahan, 1888)**

Geographical distribution: The species has been reported in Myanmar and Laos. Its new record was from Chiang Mai province, Thailand.

Specimen examined: Chiang Mai province: Chiang Dao, 30.04.2006(1 ♂).

Length 17 mm; breadth 5 mm.

***Mispila kamvengal* Breuning, 1962**

Geographical distribution: The species has been reported in Laos. Its new records were from Lampang and Phrae provinces, Thailand.

Specimen examined: Lampang province: Thoen, 2.03.2004(1 ♂); Phrae province: Wang Chin, 6.08.2004(1 ♀).

Length 16-18 mm; breadth 5-7 mm.

***Monochamus guerryi* Pic, 1903**

Geographical distribution: The species has been reported in China. Its new records were from Chiang Mai and Chiang Rai provinces, Thailand.

Specimen examined: Chiang Mai province: Fang, 2.03.2002(1 ♂, 1 ♀), 6.07.2005(1 ♂, 2 ♀); Chiang Rai province: Wiang Pa Pao, 5.06.2002(1 ♂, 1 ♀), 23.08.2003(1 ♀).

Length 18-28 mm; breadth 6-8 mm.

***Nipholophia chujoi* Gressitt, 1951**

Geographical distribution: The species has been reported in Taiwan. Its new record was from Chiang Mai province, Thailand.

Specimen examined: Chiang Mai province: Mae Chaem, 5.09.2004(1 ♀).

Length 11 mm; breadth 3 mm.

***Nupserha spinifera* Gressitt, 1948**

Geographical distribution: The species has been reported in China. Its new records were from Phetchabun, Nan, Chiang Mai and Tak provinces, Thailand.

Specimen examined: Phetchabun province: Nam Nao, 14.08.2004(1 ♂): Chiang Mai province: Mae Chaem, 7.04.2005(1 ♀): Tak province: Umphang, 30.06.2007(1 ♀).

Length 7-9 mm; breadth 1.5-2 mm.

***Olenecamptus fouqueti* Pic, 1932**

Geographical distribution: The species has been reported in Cambodia, Laos and Vietnam. Its new records were from Tak, Kamphaeng Phet and Chiang Mai provinces, Thailand.

Specimen examined: Tak province: Umphang, 30.06. 2007(1 ♂), Kamphaeng Phet province: Khosam Pi Nakhon, 1.12.2005(1 ♀): Khlong Lan, 25.08.2003(1 ♂), Chiang Mai province: Fang, 2.03.2002(1 ♀).

Length 13-17 mm; breadth 3.5-4 mm.

***Parachydaeopsis laosica* Breuning, 1968**

Geographical distribution: The species has been reported in Laos. Its new record was from Phitsanulok province, Thailand.

Specimen examined: Phitsanulok province: Wang Thong, 16.05.2003(1 ♀).

Length 9 mm; breadth 2.5 mm.

***Pharsalia duplicata* Pascoe, 1866**

Geographical distribution: The species has been reported in Indonesia, Cambodia and Laos. Its new records were from Phitsanulok and Tak provinces, Thailand.

Specimen examined: Phitsanulok province: Chat Trakan, 3.05.2005(1 ♂): Tak province: Phop Phra, 5.09.2005(1 ♀).

Length 18-21 mm; breadth 6-7 mm.

***Pharsalia pulchroides* Breuning, 1964**

Geographical distribution: The species has been reported in Cambodia and Laos. Its new record was from Chiang Rai province, Thailand.

Specimen examined: Chiang Rai province: Wiang Pa Pao, 23.08.2003(1 ♂, 1 ♀), 17.03.2005(1 ♀): Doi Luang, 19.11.2002(1 ♂).

Length 18-20 mm; breadth 6.5-8 mm.

***Phrissomorimus brunneus* Breuning and Itzinger, 1943**

Geographical distribution: The species

has been reported in Myanmar. Its new records were from Lampang, Chiang Mai and Chiang Rai provinces, Thailand.

Specimen examined: Lampang province: Wiang Nua, 11 Sept. 2005(1 ♂, 1 ♀): Chiang Mai province: Doi Saket, 7.07.2003(1 ♂): Doi Kham, 1.12.2005(1 ♀): Chiang Rai province: Wiang Pa Pao, 17.03.2005(1 ♂).

Length 12-17 mm; breadth 5-6 mm.

***Pterolophia bituberculatithorax* (Pic, 1930)**

Geographical distribution: The species has been reported in Vietnam and Laos. Its new records were from Tak, Phetchabun, Chiang Mai, Chiang Rai and Mae Hong Son provinces, Thailand.

Specimen examined: Tak province: Tha Song Yang, 6.08.2003(1B&, 1 ♀): Phop Phra, 5.05.2004(1 ♀): Phetchabun province: Nam Nao, 20.02.2005(1 ♀): Chiang Mai province: Chiang Dao, 5.09.2002(1 ♂): Samoeng, 2.09.2003(1 ♂): Mae Chaem, 1.03.2006(1 ♀): Fang, 6.07.2005(1 ♂, 1 ♀): Doi Saket, 24.08.2007(1 ♀): Mae Hong Son province: Mae Sariang, 22.07.2004(1 ♂, 1 ♀), 2.12.2005(1 ♀): Chiang Rai province: Wiang Pa Pao, 17.03.2005(1 ♂).

Length 5-7 mm; breadth 1.5-2.5 mm.

***Pterolophia humerosa* (Thomson, 1865)**

Geographical distribution: The species has been reported in India, Vietnam and Laos. Its new record was from Chiang Mai province, Thailand.

Specimen examined: Chiang Mai province: Mae Taeng, 2.06.2004(1 ♀).

Length 18 mm; breadth 7 mm.

***Pterolophia mimoconsularis* Breuning, 1968**

Geographical distribution: The species has been reported in Laos. Its new record was from Phetchabun province, Thailand.

Specimen examined: Phetchabun province: Nam Nao, 2.04.2002(1 ♀).

Length 13 mm; breadth 5 mm.

***Pterolophia paralaosensis* Breuning, 1968**

Geographical distribution: The species

has been reported in Laos. Its new record was from Chiang Mai province, Thailand.

Specimen examined: Chiang Mai province: Samoeng, 7.04.2004(1 ♀).

Length 10.5 mm; breadth 4 mm.

***Pterolophia partealbicollis* Breuning, 1964**

Geographical distribution: The species has been reported in Laos. Its new record was from Lampang province, Thailand.

Specimen examined: Lampang province: Chae Son, 8.07.2004(1 ♀).

Length 10 mm; breadth 3.5 mm.

***Rhodopina griseipes* Breuning, 1963**

Geographical distribution: The species has been reported in Laos. Its new record was from Chiang Mai province, Thailand.

Specimen examined: Chiang Mai province: Mae Chaem, 5.09.2004(1 ♀).

Length 16.5 mm; breadth 6 mm.

***Serixia apicefuscipennis* Breuning, 1968**

Geographical distribution: The species has been reported in Laos. Its new record was from Chiang Mai province, Thailand.

Specimen examined: Chiang Mai province: Fang, 6.07.2005(1 ♂).

Length 8.5 mm; breadth 3 mm.

***Sthenias franciscana* Thomson, 1865**

Geographical distribution: The species has been reported in Indonesia, Malaysia and Borneo. Its new record was from Phrae province, Thailand.

Specimen examined: Phrae province: Wang Chin, 10.12.2005(1 ♂).

Length 16.5 mm; breadth 5.5 mm.

***Stibara humeralis* Thomson, 1865**

Geographical distribution: The species has been reported in Malaysia, Myanmar and Laos. Its new record was from Chiang Mai province, Thailand.

Specimen examined: Chiang Mai province: Doi Saket, 7.07.2003(1 ♀).

Length 19.5 mm; breadth 6.5 mm.

***Stibara subpunctata* Breuning, 1954**

Geographical distribution: The species has been reported in Myanmar. Its new record was from Chiang Mai province, Thailand.

Specimen examined: Chiang Mai province: Doi Inthanon, 15.08.2006(1 ♀); Doi Saket, 17.11.2007(1 ♂).

Length 19-20 mm; breadth 5-5.5 mm.

***Thylactus uniformis* Pic, 1934**

Geographical distribution: The species has been reported in China. Its new record was from Lamphun province, Thailand.

Specimen examined: Lamphun province: Mae Tha, 7.04.2002(1 ♀).

Length 18 mm; breadth 4 mm.

***Trachystohammus subelongatus* Pic, 1936**

Geographical distribution: The species has been reported in Myanmar. Its new record was from Tak province, Thailand.

Specimen examined: Tak province: Phop Phra, 5.05.2004(1 ♀).

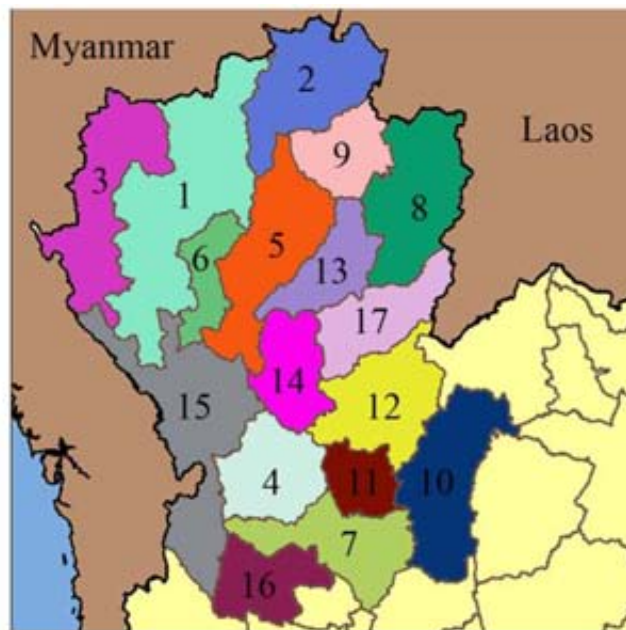
Length 23 mm; breadth 8 mm.

***Xenolea asiatica* (Pic, 1924)**

Geographical distribution: The species has been reported in India, Vietnam, China, Japan and Laos. Its new record was from Chiang Mai province, Thailand.

Specimen examined: Chiang Mai province: Doi Saket, 1.10.2004(1 ♀).

Length 7.5 mm; breadth 2.5 mm.



Collecting locations associated with species:

1. Chiang Mai Province

*Agelasta bifasciana*  
*Anamera desmaculata*  
*Anamera obesa*  
*Anamera strandi*  
*Anameromorpha metallica*  
*Annamanum chebanum*  
*Anoplophora birmanica*  
*\*Anoplophora medenbachii*  
*\*Astathes violaceipennis*  
*\*Batocera thomsonii*  
*\*Blepephaeus ocellatus*  
*Cleptometopus similis*  
*Cylindrepomus viridipennis*  
*Epicedia maculatrix*  
*Eutaenia albomaculata*  
*Glenea mathematica*  
*\*Glenea subviridescens*  
*Glenea vaga*  
*Hoplothrix rivulosus*  
*\*Monochamus guerryi*  
*Nipholophia chujoi*  
*\*Nupserha spinifera*  
*\*Olenecamptus fouqueti*  
*\*Phrissomorimus brunneus*  
*\*Pterolophia bituberculatithorax*  
*Pterolophia humerosa*  
*Pterolophia paralaosensis*  
*Rhodopina griseipes*  
*Serixia apicefusicipennis*  
*Stibara humeralis*  
*Stibara subpunctata*  
*Xenolea asiatica*

2. Chiang Rai Province

*\*Anoplophora medenbachii*  
*\*Astathes violaceipennis*  
*\*Blepephaeus ocellatus*  
*Drioepa luteolineata*  
*\*Glenea subviridescens*  
*\*Monochamus guerryi*  
*Pharsalia pulchroides*  
*\*Phrissomorimus brunneus*  
*\*Pterolophia bituberculatithorax*

3. Mae Hong Son Province

*Glenea quadrinotata*  
*Gnoma gilmori*  
*\*Pterolophia bituberculatithorax*

4. Kamphaeng Phet Province

*\*Batocera thomsonii*  
*Hirtaeschopalaea fasciculata*  
*\*Olenecamptus fouqueti*

5. Lampang Province

*\*Mispila kamvengal*  
*\*Phrissomorimus brunneus*  
*Pterolophia partealbicollis*

6. Lamphun Province

*Thylactus uniformis*

7. Nakhon Sawan Province

no newly recorded specimens found

8. Nan Province

*Anoplophora stanleyana*  
*\*Nupserha spinifera*

9. Phayao Province

*\*Glenea subviridescens*

10. Phetchabun Province

*\*Nupserha spinifera*  
*\*Pterolophia bituberculatithorax*  
*Pterolophia mimoconsularis*

11. Phichit Province

no newly recorded specimens found

12. Phitsanulok Province

*Parachydaeopsis laosica*  
*\*Pharsalia duplicata*

13. Phrae Province

*Choeromorpha subfasciata*  
*\*Mispila kamvengal*  
*Sthenias franciscana*

14. Sukhothai Province

no newly recorded specimens found

15. Tak Province

*\*Nupserha spinifera*  
*\*Olenecamptus fouqueti*  
*\*Pharsalia duplicata*  
*\*Pterolophia bituberculatithorax*  
*Trachystohammus subelongatus*

16. Uthai Thani Province

no newly recorded specimens found

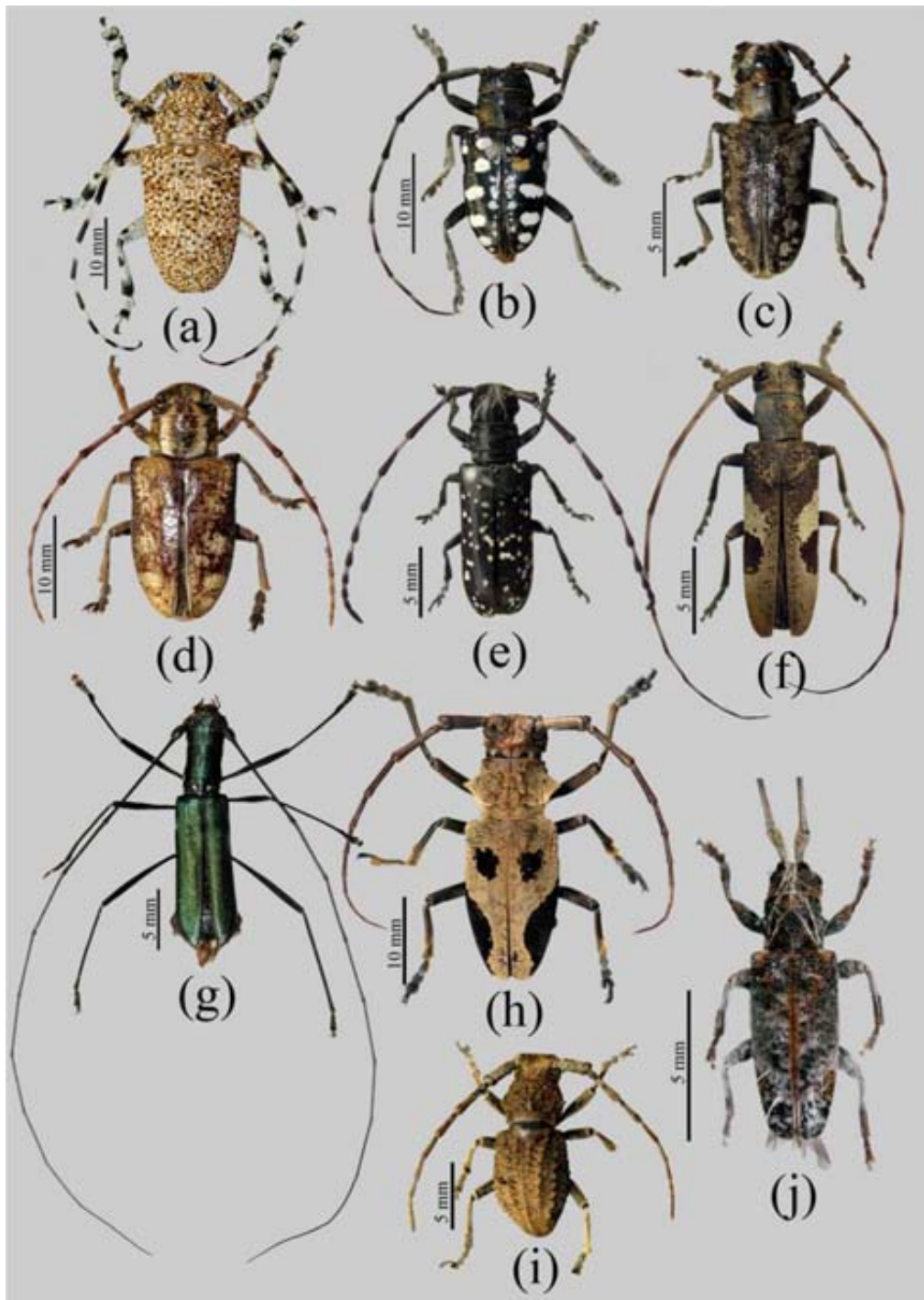
17. Uttaradit Province

no newly recorded specimens found

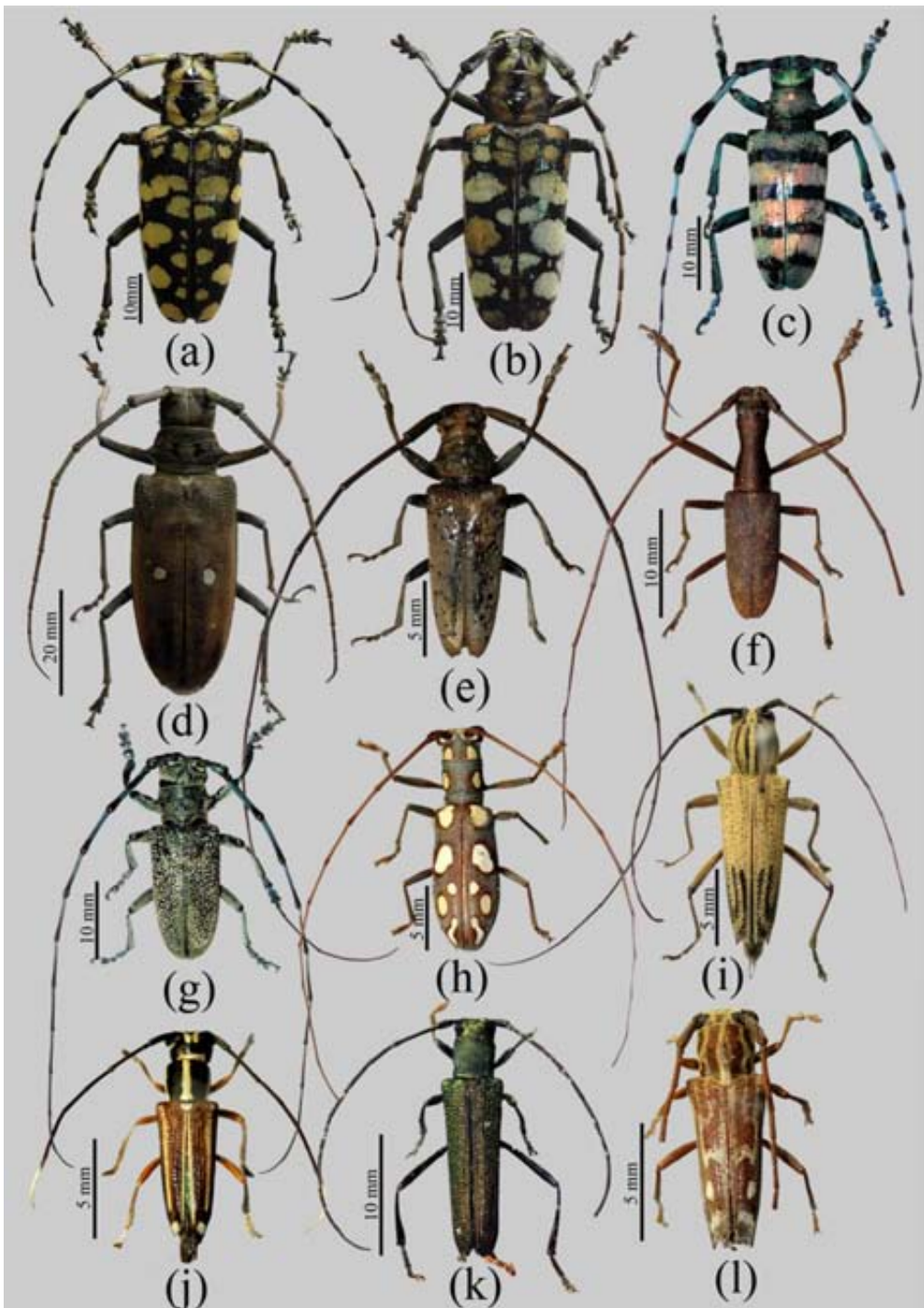
\*species found in more than one province

**Figure 1** Map of northern Thailand showing provinces involved in the study and listing species collected by province.

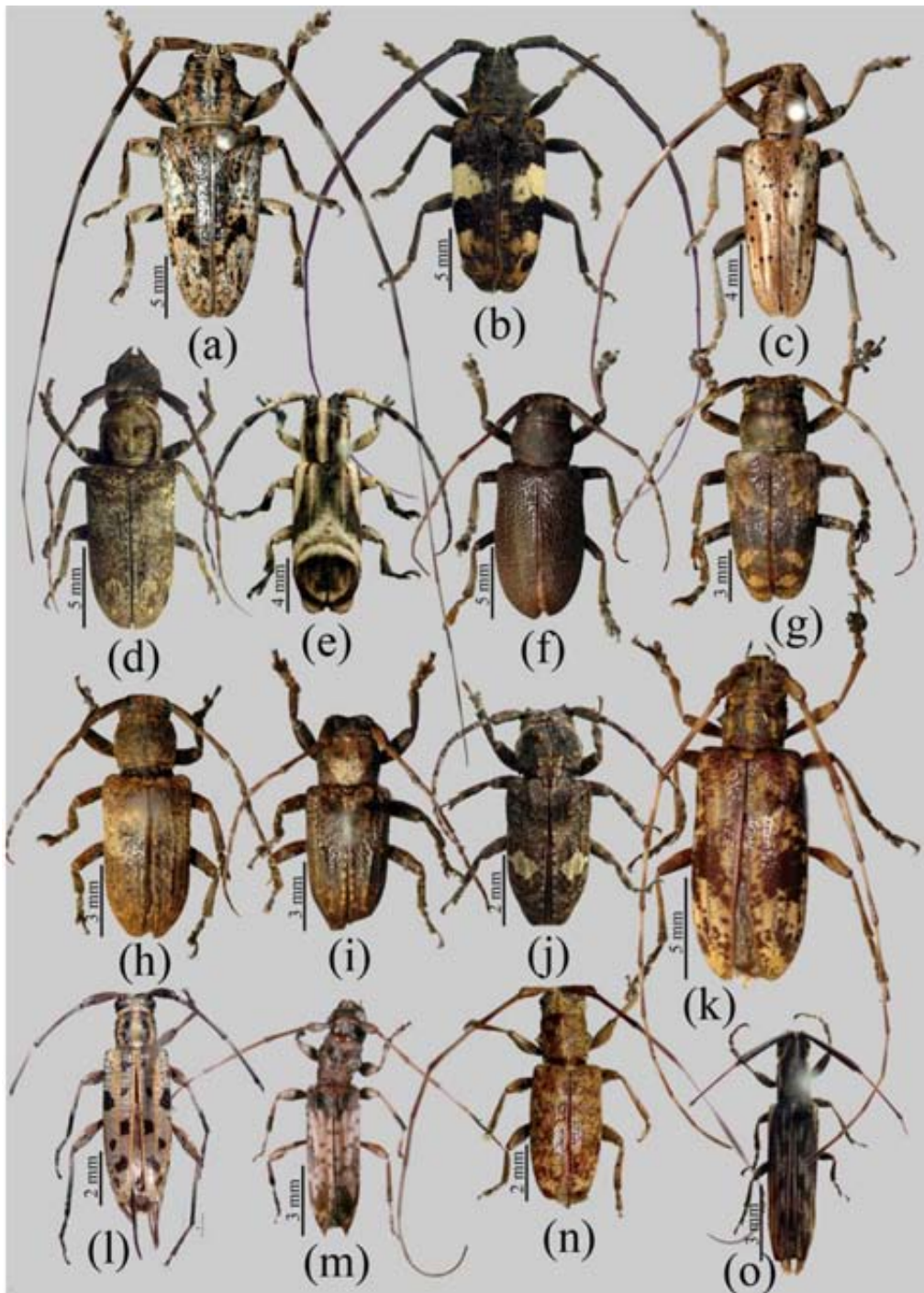




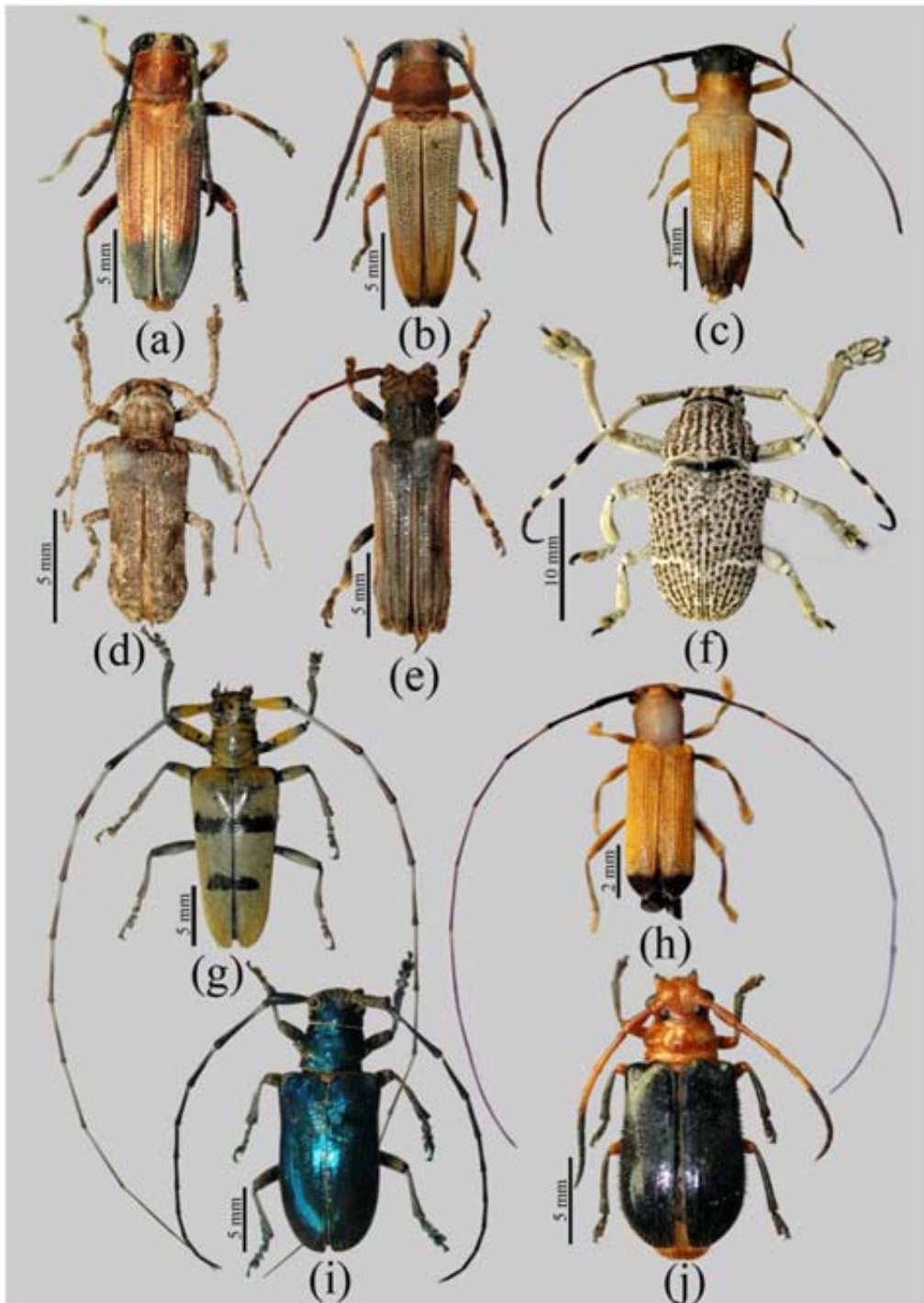
**Figure 2** Adult longhorn beetles: (a) *Agelasta bifasciana*; (b) *Anamera desemaculata*; (c) *A. strandi*; (d) *A. obesa*; (e) *Eutaenia albomaculata*; (f) *Annamanum chebanum*; (g) *Cylindrecamptus viridipennis*; (h) *Epicedia maculatrix*; (i) *Phrissomorimus brunneus*; (j) *Hirtaeschopalea fasciculata*.



**Figure 3** Adult longhorn beetles: (a) *Anoplophora birmanica*; (b) *A. stanleyana*; (c) *A. medenbachii*; (d) *Batocera thomsonii*; (e) *Blephephaeus ocellatus*; (f) *Gnoma gilmouri*; (g) *Monochamus guerryi*; (h) *Olenecamptus fouqueti*; (i) *Glenea quadrinotata*; (j) *G. mathematica*; (k) *G. subviridescens*; (l) *G. vaga*.



**Figure 4** Adult longhorn beetles: (a) *Pharsalia duplicata*; (b) *P. pulchroides*; (c) *Hoplothrix rivulosus*; (d) *Mispila kamvengal*; (e) *Sthenias franciscana*; (f) *Pterolophia humerosa*; (g) *P. mimoconsularis*; (h) *P. paralaosensis*; (i) *P. partealbicollis*; (j) *P. bituberculatithorax*; (k) *Rhodopina griseipes*; (l) *Driopea luteolineata*; (m) *Parachydaeopsis laosica*; (n) *Xenolea asiatica*; (o) *Cleptometopus similis*.



**Figure 5** Adult longhorn beetles: (a) *Stibarara humeralis*; (b) *S. subpunctata*; (c) *Nupserha spinifera*; (d) *Nipholophia chujoi*; (e) *Thylactus uniformis*; (f) *Choeromorpha subfasciata*; (g) *Trachystohammus subelongatus*; (h) *Serixia apicefuscipennis*; (i) *Anameromorpha metallica*; (j) *Astathes violaceipennis*.

## DISCUSSION

Lamiinae, a widely diversified subfamily, contains genera with many extreme colors and sizes. Some are amongst the giants of the insect class while others have long antennae, or short legs, or a combination of both. However, a common characteristic of the insect is its flat face. The Oriental region has the largest number of Lamiinae. The tribe Lamiini has evolved into approximately 180 genera in Southeast Asia and nearby regions. Many genera and species are poorly known and some taxa are still undescribed (Fah, 2010). In Papua Indonesia, the Lamiinae are represented by 216 species. Some species are recorded from New Guinea but no exact locality is known and none have been reported from Papua New Guinea (Withaar, 2010).

There were just three genera (*Xenolea*, *Batocera* and *Glenea*) in which different species were identified from those already in Thailand. New records were identified for 47 species from 34 genera of this subfamily, with 22 species found mostly in Chiang Mai province. According to Ek-Amnuay (2002) in the survey and collection of the Coleopterans of Thailand, there had been no existing reports of these new-recorded longhorn beetles. In the surveys, the areas where the 22 species were located were hill evergreen forest and mixed deciduous forest thought to be favored by them. It was possible that Ek-Amnuay's survey did not include such localities resulting in different species encountered. From all new recorded species, *Pterophia bituberculatithorax* was observed to have the widest geographical distribution in five provinces in the upper northern region of Chiang Mai, Chiang Rai, Mae Hong Son, Phetchabun and Tak provinces, with similar topography to the areas described in Chiang Mai. In addition, the weather is cold all year round which enhances reproduction.

The lower northern localities in Nakhonsawan, Uthai Tani, Uttaradit, Phichit and

Sukhothai provinces where most of the field survey work was concentrated were watery and flat and were suitable for agriculture. The forests in the areas consisted of reforestation with the natural forest being mostly deciduous dipterocarp forest and grass communities. Therefore, there were no new records of longhorn Lamiinae found in such conditions, in contrast to those in the upper lands. The same conditions were apparent in most provinces such as Phitsanulok, Kamphaeng Phet, Lamphun, where the few species of new records of various genera were found to be sparsely distributed.

## CONCLUSION

In total, 47 newly recorded species of longhorn beetles were found in northern Thailand. The locations of the new species (some being found in more than one province) were: 22 in Chiang Mai province; 9 in Chiang Rai province; 5 in Tak province; 3 in each of Mae Hong Son, Kamphaeng Phet, Lampang, Phetchabun and Phrae provinces; 2 in each of Nan and Phitsanulok provinces; and 1 in each of Lamphun and Phayao provinces. In five provinces—namely, Nakhon Sawan, Uthai Thani, Uttaradit, Phichit and Sukhothai, no specimens of newly recorded species were found. *Pterophia bituberculatithorax* was widely distributed in five provinces (Chiang Mai, Chiang Rai, Mae Hong Son, Phetchabun and Tak) while *Nupserha spinitera* was found only in four provinces (Chiang Mai, Nan, Phetchabun and Tak). The newly recorded species of longhorn beetle were richly scattered in the upper north region and sparsely scattered in the lower north region.

## ACKNOWLEDGEMENTS

This research was partially funded by Kasetsart University Graduate School Grants.

## LITERATURE CITED

- Baur, B., A. Coray, N. Minoretti and S. Zschokke. 2005. Dispersal of the endangered flightless beetle *Dorcadion fuliginator* (Coleoptera: Cerambycidae) in spatially realistic landscapes. **Biol. Conserv.** 124: 49–61.
- Baur, B., S. Zschokke, A. Coray, M. Schläpfer and A. Erhardt. 2002. Habitat characteristics of the endangered flightless beetle *Dorcadion fuliginator* (Coleopter: Cerambycidae): implications for conservation. **Biol. Conserv.** 105: 133–142.
- Cherepanov, A.I. 1990. **Cerambycidae of Northern Asia Vol. 1.** Oxonian Press Pty Ltd., New Delhi. 642 pp.
- Department of National Park, Wildlife and Plant Conservation. 2010. Statistical Data of National Park, Wildlife and Plant Conservation. Royal Forest Department, Bangkok. Thailand. [Available from: <http://www.dnp.go.th/statistics/dnpstatmain.asp>]. [Cited: 20 January 2011].
- Ek-Amnuay, P. 2002. **Beetles of Thailand.** Amarin Book Center Co.,Ltd. Bangkok. 408pp.
- Fah, C.L. 2010. Introduction of longhorn beetle. Subfamily Lamiinae. Longhorn Beetles of Singapore. [Available from: <http://www.singaporeinsects.com/references.htm>]. [Cited: 16 January 2011].
- Gressitt, J.L., J.A. Rondon and S. von Breuning. 1970. **Cerambycid beetles of Laos.** Entomology Department, Bernice P. Bishop Museum. Honolulu, Hawaii, USA. 651 pp.
- Gutowski, J.M. 1990. Pollination of the orchid *Dactylorhiza fuchsia* by longhorn beetles in primeval forests of Northeastern Poland. **Biological Conserv.** 51(4): 287–297.
- Holzschuh, C. 1991a. 33 neue Bockkäfer aus der palaearktischen und orientalischen Region (Coleoptera, Cerambycidae) [in German]. **Forstlichen Bundesversuchsanstalt Berichte** 51: 1–167.
- Holzschuh, C. 1991b. 45 neue Bockkäfer aus Asien, vorwiegend aus Thailand (Coleoptera: Disteniidae und Cerambycidae) [in German]. **Forstlichen Bundesversuchsanstalt Berichte** 51: 1–167.
- Holzschuh, C. 1991c. 63 neue Bockkäfer aus Asien, vorwiegend aus China und Thailand (Coleoptera: Disteniidae und Cerambycidae) [in German]. **Forstlichen Bundesversuchsanstalt Berichte** 60: 5–71.
- Holzschuh, C. 1992. 57 neue Bockkäfer aus Asien, vorwiegend aus China, Thailand und Vietnam (Coleoptera, Cerambycidae) [in German]. **Forstlichen Bundesversuchsanstalt Berichte** 69: 5–60.
- Holzschuh, C. 1993. 60 neue Bockkäfer aus Asien, vorwiegend aus China und Thailand (Coleoptera: Cerambycidae) [in German]. **Forstlichen Bundesversuchsanstalt Berichte** 75: 5–64.
- Holzschuh, C. 1995. Beschreibung von 65 neuen Bockkäfer aus Europa und Asien, vorwiegend aus China und Thailand (Coleoptera: Disteniidae und Cerambycidae) [in German]. **Forstlichen Bundesversuchsanstalt Berichte** 88: 5–63.
- Holzschuh, C. 1998. Beschreibung von 68 neuen Bockkäfer aus Asien, überwiegend aus China und zur Synonymie einiger Arten (Coleoptera: Cerambycidae) [in German]. **Forstlichen Bundesversuchsanstalt Berichte** 107: 5–65.
- Holzschuh, C. 1999. Beschreibung von 71 neuen Bockkäfer aus Asien, vorwiegend aus China, Laos, Thailand und Indien (Coleoptera: Cerambycidae) [in German]. **Forstlichen Bundesversuchsanstalt Berichte** 110: 5–70.
- Lingafelter, S.W. and E.R. Hoebeke. 2002. **Revision of Anoplophora (Coleoptera: Cerambycidae).** The Entomological Society of Washington, Washington, D.C., USA. 236pp.
- Noerdjito, W.A., H. Makihara and A. Sugiarto.

2003. How to Find Out Indicated Cerambycid Species For Forest Condition Status in Case of Gunung Halimun National Park, West Java and Bukit Bangkirai Forest, East Kalimantan. **Rehabilitation of Degraded Tropical Forests, Southeast Asia** pp. 57–60.
- Özdikmen, H. and Ü. Çağlar. 2004. Contribution to the knowledge of longhorned beetles (Coleoptera, Cerambycidae) from Turkey subfamilies Prioninae, Leturinae, Spondylidinae and Cerambycinae. **J. Ent. Res. Soc.** 6(1): 39–69.
- Tasen, W. 2001. **The Role of Some Major Insect Pollinators on Pollination of Teak (*Tectona grandis* Linn.)**. MSc. (Forestry) thesis, Major Field Forest Biology, Associate Professor Decha Wiwatwitaya. 79pp.
- Withaar, G. 2010. The flat-faced longhorn beetle (Coleoptera: Cerambycidae, Laminae) of Papua Indonesia. Papua Insects. The Papua Insect Foundation. [Available from: <http://www.papua-insectsnl/insect%20orders/Coleoptera/Lamiinae/Lamiinae.html#top>]. [Cited: 5 May 2010].